Karlsruher Institut für Technologie

Antrittsvorlesung von
Prof. Dr. Harald Sack und Prof. Dr. J. Marius Zöllner

29. November 2017 · 17:30 Uhr · Fritz-Haller-Hörsaal

INSTITUT FÜR ANGEWANDTE INFORMATIK UND FORMALE BESCHREIBUNGSVERFAHREN (AIFB)

Antrittsvorlesung von
Prof. Dr. Harald Sack und
Prof. Dr. J. Marius Zöllner

Mittwoch, 29. November 2017
17:30 Uhr
Fritz-Haller-Hörsaal | Geb. 20.40

KIT-Campus Süd
Englerstraße 7
76131 Karlsruhe

Programm

- **Vorstellung der neuen Kollegen**
  Dekan der KIT-Fakultät für Wirtschaftswissenschaften
- **Antrittsvorlesung „Combining Semantics and Deep Learning for Intelligent Information Services"**
  Prof. Dr. Harald Sack
- **Antrittsvorlesung „From Deep Learning to Autonomous Systems"**
  Prof. Dr. J. Marius Zöllner

Anschließend Empfang

Combining Semantics and Deep Learning for Intelligent Information Services

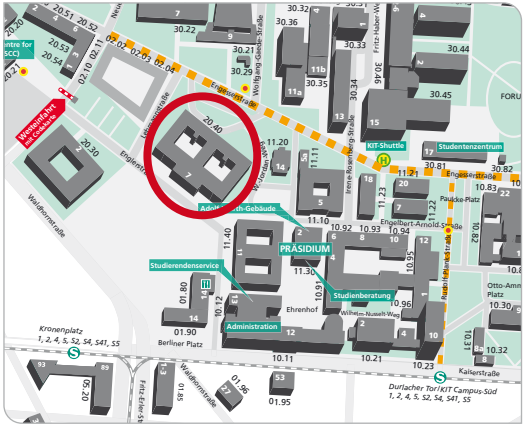
Harald Sack

Understanding requires the correct interpretation of the meaning of information. Semantic technologies enable the representation of explicit semantics in terms of formal knowledge representations to draw logical conclusions and to infer new knowledge. Machine learning on the other hand is able to learn from examples by making use of computational statistics, mathematical optimization, as well as predictive analytics, without the need of explicit knowledge representations. However, when applying one of these two approaches to information systems and services with the aim of improving search, retrieval, or recommendations, the question arises of how to efficiently combine them.
The presentation will show how machine learning and symbolic logic complement each other to open up information from unstructured data, such as natural language texts, images, or audiovisual data, and to enable new ways to access electronic libraries and archives in an exploratory way.

From Deep Learning to Autonomous Systems

J. Marius Zöllner

Machine Learning and Autonomous Systems are emerging research topics that become more and more interweaved. In addition to continuous advances in learning, we see successful applications in the domain of autonomous vehicles. These range from learning individual components of the overall system, over several components at once, to direct learning of vehicle control commands from visual sensor input. However, when bringing these approaches to real world autonomous systems, the question on how to incorporate those techniques profitably and safely into production-grade systems and new applications arises. The presentation will outline the power and the potential of learning approaches for autonomous systems and discuss the question: Deep Driving – are we there yet?



Karlsruher Institut für Technologie

Institut für Angewandte Informatik und
Formale Beschreibungsverfahren (AIFB)

Gisela Schillinger

Campus Süd, Geb. 05.20
Kaiserstr. 89, 76131 Karlsruhe

Telefon: 0721-608-44750
E-Mail: gisela.schillinger@kit.edu

www.kit.edu